

REMARKS/ARGUMENTS AFTER FINAL

Claims 1-22 remain in the application. Reconsideration of the application is respectfully requested.

1. REAL PARTY IN INTEREST

The real party in interest for the purpose of these remarks is Motorola, Inc.

2. STATUS OF CLAIMS

These remarks are in response to a final Office Action dated December 19, 2003. Claims 1-22 remain in the application. In the final Office Action dated December 19, 2003, the Examiner rejected Claims 1-22 under 35 U.S.C. § 103 as being unpatentable over Rezaiifar et al. (USPN 6,526,030) in view of Cioffi et al. (USPN 5,838,799).

No claims have been allowed. The claims have been reproduced above.

3. AMENDMENTS

No amendments have been made to the application.

4. SUMMARY OF INVENTION

A novel method for enabling a receiving device to operate in a low power decoding mode is proposed by Applicants. A demonstration of this method is exemplified by FIGS. 4, 7-8 and at text starting at page 9, line 9. In particular, the novel method requires that each sub-channel of the novel method occupy a "discrete frequency band."

5. ISSUES

Issue 1

Whether Claims 1-22 are patentable under 35 U.S.C. § 103 over Rezaiifar in view of Cioffi?

6. GROUPING OF CLAIMS

Applicant designates the following groups of claims:

Group I: Claims 1-22

7. ARGUMENT

- (i) Rejection under 35 U.S.C. § 112, first paragraph:
None.
- (ii) Rejection under 35 U.S.C. § 112, second paragraph:
None.
- (iii) Rejection under 35 U.S.C. § 102
None.
- (iv) Rejection under 35 U.S.C. § 103

The Examiner has rejected Claims 1-22 under 35 U.S.C. § 103 as being unpatentable over Rezaiifar in view of Cioffi. After a careful review of Rezaiifar, Cioffi, and the claims, it is believed that the rejection is in error and the rejection is, therefore, traversed.

There are a number of reasons why the Applicants believe that the rejection is in error. First, Rezaiifar is not “analogous prior art for the purpose of analyzing the obviousness of the subject matter at issue. Rezaiifar pertains to a “CDMA communication systems which conforms to the IS-95 standard.” Rezaiifar, background, col. 5, lines 13-19. As is known to a person of ordinary skill in the art, the term CDMA is used to refer to a form of communication where data is assigned a unique sequence code and sent over a channel. As such, a channel and any

associated channel structures of the channel are allocated to a *specific frequency*. In contrast, Applicants' invention is drawn to the limitation of "wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band" and is exemplified by FIGS. 4, 7-8 and at text starting at page 9, line 9 of Applicants' specification. "In one embodiment, the time slot comprises a portion of a downlink TDMA time slot destined for a receiving device to enable reduced power consumption of the receiving device. The time slot is divided into control channels and payload channels *separated in frequency*. ... This might be implemented, for example, in an eight sub-channel system, by using channels 3 and 6 as control channels and channels 1, 2, 4 5, 7 and 8 as payload channels." Applicants' invention requires that sub-channels be *separated in frequency* and the channels in the Rezaiifar reference are associated with a *specific frequency*. As is known in the art, communication systems which have sub-channels that are *separated in frequency* are irrelevant to communication systems which have channels with a *specific frequency*. Further, as is known to a person of ordinary skill in the art, the CDMA technology and channel structure of Rezaiifar is irrelevant to the technology specified by the limitation "wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band." Because Rezaiifar is not concerned with "discrete frequency band" technology and is drawn to CDMA technology and channel structures, Rezaiifar is not "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue. Since Rezaiifar is not "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue, the rejection under 35 U.S.C. § 103(a) is improper and should be withdrawn.

Second, notwithstanding that Rezaiifar is not "analogous prior art," MPEP § 2141.03 requires that "[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). The claim limitation "wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band" is not found in the Rezaiifar reference. The Examiner asserts that this limitation is disclosed by FIG. 3 of the Rezaiifar reference. However, the Examiner appears to be mistaken. FIG. 3 specifically refers to *logical* channels that utilize the CDMA technology to multiplex to a *single* RF carrier (FIG. 3, col. 3, lines 5-21). The forward link physical channel is

allocated to one specific frequency and the corresponding data and control channels specified in FIG. 3 are also allocated to the *same* specific frequency. Col. 1, lines 65-67; FIG. 3. The same is true for the reverse link physical channel. The reverse link physical channel is allocated to one specific frequency and thereby the channels specified in FIG. 4 are also allocated to the *same* specific frequency. Col. 1, lines 65-67; FIG. 4. Nowhere is there mention of the limitation “wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band.” Since the claimed invention is drawn to “wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band,” and Rezaiifar does not teach or suggest this particular limitation, a prima facie case for unpatentability as not been made. Since a prima facie case of obviousness under MPEP 2143.03 has not been made, the rejection is believed to be improper and should be withdrawn.

Further, the Examiner is incorrect in stating that the limitation “operating in a first decoding mode” is taught or suggested by the Rezaiifar reference. The Examiner cites FIG. 7A as teaching the limitation “operating in a first decoding mode.” FIG. 7A has nothing to do with “operating in a first decoding mode,” as it is “a diagram of an exemplary reverse link pilot/control channel frame format.” Col. 4, lines 50-51; col. 14, lines 25-33. The figure pertains to the timing and scheduling of messages by a base station to transmit supplemental channels and then to assign rates to carriers of a remote station. Col. 4, lines 50-51; col. 14, lines 25-33. This passage is not drawn to “operating in a first decoding mode” as described in Applicants’ invention. “Operating in a first decoding mode” refers to enabling “reduced power consumption of the receiving device” where the receiving device is decoding control sub-channels and not payload channels. Specification, title, pg. 4, 5, 9, 10, FIGS 4, 7-8. Since the claimed invention is drawn to “operating in a first decoding mode” and Rezaiifar does not teach or suggest this particular limitation, a prima facie case for unpatentability as not been made. Since a prima facie case of obviousness under MPEP 2143.03 has not been made, the rejection is believed to be improper and should be withdrawn.

Further, the Examiner is incorrect in stating that the limitation “yielding control information” is taught or suggested by the Rezaiifar reference. The Examiner cites FIG. 7 as teaching the limitation “yielding control information” of the present application. In contrast, FIGS. 7A-7E teach a protocol for transmitting control information associated with the reverse physical link whereby the control information is transmitted in a frame format and those frames

are sent on *one* specific frequency. FIGS. 7A-7E; Col. 14, lines 25-33. The cited Figures clearly illustrate timing diagrams for a logical channel, i.e. the reverse physical link that utilizes the CDMA technology to multiplex to a *single* RF carrier. FIGS. 7A-7E. Since the claimed invention is drawn to “yielding control information” and Rezaiifar does not teach or suggest this particular limitation, a prima facie case for unpatentability as not been made. Since a prima facie case of obviousness under MPEP 2143.03 has not been made, the rejection is believed to be improper and should be withdrawn.

Third, notwithstanding that Rezaiifar is not “analogous art” and that claim limitations of the Applicants’ invention are missing from the Rezaiifar reference, Rezaiifar teaches away from the claimed invention. The Rezaiifar reference teaches away from the limitation of “wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band.” There are a number of passages in the Rezaiifar reference that teach away from the required limitation and specifically state that a CDMA structure is required for the invention in Rezaiifar to operate. For example, “other techniques [for facilitating communications] such as TDMA and FDMA are known, [but] CDMA has significant advantages over these other techniques.” Col. 1, lines 17-23. This passage states that communication systems such as TDMA and FDMA are limited and inherently not as good as CDMA technology. As the technology described in Applicants’ claimed invention pertains to the limitation “wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band” and such a limitation is not at all related to CDMA technology, Rezaiifar teaches away from Applicants’ claimed invention. As is known to one of ordinary skill in the art, the limitation of “wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band” is not CDMA technology and in one embodiment can be described as TDMA technology. Specification, pg. 5-6. Unlike Rezaiifar, Applicants invention requires the limitation “wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band.” Rezaiifar teaches away from the limitation “wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band.”

Fourth, notwithstanding the previous arguments, MPEP § 2141.02 requires that the claimed invention as a whole be considered. Section 2141.02 provides that “in determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218

(Fed. Cir. 1983).” [emphasis in original] “It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of the other parts necessary to the full appreciation of what such references fairly suggest to one of ordinary skill in the art.” In re Wesslau, 147 USPQ 391 (CCPA 1965). The Examiner states that the difference between Applicants’ claimed invention and the Rezaiifar prior art is that Rezaiifar does not specifically disclose the limitation “multi-carrier signal comprising a plurality of sub-channels, wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band” and Cioffi “discloses the limitation “multi-carrier signal comprising a plurality of sub-channels, wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band (see Fig. 12, lines 2-19 and Fig. 5,6)¹.” Office Action, pg.3. The Examiner states that this difference (i.e. plurality of sub-channels and sub-channels occupying a discrete frequency band) would have been obvious to one of ordinary skill in the art. Specifically, the Examiner states that this difference “would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the Rezaiifar system as taught by Cioffi. The motivation does so would be to achieve quality reception for digital multi-carrier signal in mobile communication system.” Office Action, pg. 3. However, MPEP § 2141.02’s requirement is not whether the difference is obvious, but whether Applicants’ invention as a whole is obvious and Applicants’ invention as a whole is not only the limitation “wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band.” For the Examiner to have considered the Applicants’ invention as a whole, he would have had to find obvious the limitation “wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band” within the context of the other elements of the claimed invention. Claims 1-22; Office Action, pg. 3. Since the Examiner did not consider the claimed invention as a whole, the rejection under 35 U.S.C. § 103 is improper and should be withdrawn.

Fifth, notwithstanding the previous arguments, MPEP § 2143.01 requires that the prior art suggest the desirability of the claimed invention. Section 2143.01 states that “the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680 (Fed. Cir. 1990).” Rezaiifar is concerned with CDMA technology and Cioffi is concerned with

¹ There is no Fig. 12 in the Cioffi patent and reference to lines 2-19 appears to be incorrect.

radio technology. In neither Rezaiifar nor Cioffi is there any teaching, suggestion, or motivation to combine the technologies of “CDMA” and “radio” technologies. Further, as is known to one of ordinary skill in the art, a combination of frequency modulation with code division multiple access is inapposite. Applicants’ understanding of the Examiner to represent that there is desirability of combining the technologies of Rezaiifar with Cioffi; but absent a teaching, suggestion, or motivation in the prior art references themselves, the combination of Rezaiifar with Cioffi is improper. Since the combination of Rezaiifar and Cioffi is improper, the rejection under 35 U.S.C. 103(a) is improper and should be withdrawn.

Finally, it would not be an obvious matter for one skilled in the art to reconstruct Rezaiifar and Cioffi to achieve Applicant’s invention as recited in the Applicant’s claims without the benefit of hindsight of Applicant’s disclosure and such is clearly improper. As numerous Federal Circuit cases have admonished, the Examiner must be ever alert not to read obviousness into an application on the basis of Applicant’s own statements and must further view the prior art without reading into that art Applicant’s teachings. In re Spohnable, 405 F.2d 578 (CCPA 1969). It is not enough for a valid rejection of the patent application to view the prior art in retrospect; once Applicant’s disclosure is known, the prior art should be viewed by itself to see if it fairly discloses what the Applicant’s have done. In re Schaffer, 220 F.2d 476 (CCPA). “A piecemeal reconstruction of prior art patents in light of applicant’s disclosure shall not be a basis for obviousness.” In re Kamm & Young, 172 USPQ 298 (CCPA 1972). Because the Examiner has used the teachings of the present application as a road map to combine Rezaiifar with Cioffi, the combination of Rezaiifar with Cioffi is improper. Thus, the rejection of Claims 1-22 under 35 U.S.C. § 103(a) is improper and should be withdrawn.

8. CONCLUSION

For all the above reasons, Applicants respectfully submit that the rejection of Claims 1-22 under 35 U.S.C. § 103(a) is in error and the claims be allowed.

Accordingly, this application is believed to be in proper form for allowance and an early notice of allowance is respectfully requested.

Please charge any fees associated herewith, including extension of time fees, to **Deposit Account 502117**.

Respectfully submitted,

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